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JUN 17 2016

Ref: 8EPR-EP

James Hutmacher, Chair
South Dakota Water Management Board
Joe Foss Building, 523 East Capitol Avenue
Pierre, South Dakota 57501

Re: Approval of the South Dakota Water Quality Standards Revisions

Dear Chairman Hutmacher:

The U.S. Environmental Protection Agency (EPA or the Agency) has completed its review of the revisions to South Dakota (State) water quality standards (WQS). The South Dakota Department of Environment and Natural Resources (DENR) proposed revisions to WQS were presented at the December 3, 2014 hearing before the State's Water Management Board (Board). At the hearing the Board adopted revisions, which were later approved by the Legislative Interim Rules Committee on December 16, 2014. The revised WQS were submitted to EPA for review with a letter dated August 6, 2015 from Steven M. Pirner, Secretary of the DENR. Receipt of the revised South Dakota WQS on August 11, 2015 initiated EPA review.[1] The EPA concludes that the revisions adopted by the Board, excluding changes to two Fall River segments and a selenium criterion, are consistent with the Clean Water Act (CWA) and the implementing federal WQS regulation at 40 C.F.R. Part 131. Hence, with the exception of the recreation use changes to Fall River and selenium criterion (see below), these WQS revisions are approved pursuant to CWA Section 303(c).

Revised Water Quality Standards

The DENR proposed revisions to the State WQS, which were made available to the public through the DENR website, newspaper and other public notices. The DENR also distributed a Statement of Basis[2], and redline strikeout version of proposed revisions and supporting materials via its website. The DENR held a public comment period soliciting public input and participation on the proposed revisions and supporting materials from October 17 through December 2, 2014. The DENR accepted comments on the proposed revisions to Administrative Rules of South Dakota (ARSD), Chapters 74:51:01 *Surface Water Quality Standards*; 74:51:02 *Uses Assigned to Lakes*; and 74:51:03 *Uses Assigned to Streams.* The proposed revisions were modified in response to comments received. The DENR presented the proposed revisions at a December 3, 2014 public hearing before the Board.

The Statement of Basis outlined a number of proposed revisions to State WQS. The revisions proposed to *ARSD 74:51:01 Surface Water Quality Standards* included: changes to definitions; updated references; site-specific water temperature criteria for the Black Hills Trout Management Area and total

[1] The EPA revised its WQS regulation (40 C.F.R. Part 131) on August 21, 2015. South Dakota's WQS were submitted to the EPA before the effective date of the EPA's final rule (October 20, 2015), and therefore the EPA reviewed them for consistency with the regulation in effect prior to the final rule. See 80 Fed. Reg. 51020, 51022 (August 21, 2015).
[2] *Statement of Basis: Revisions to ARSD 74:51:01, 74:51:02, 74:51:03 Surface Water Quality Program*, SD DENR, 2014.

suspended solids criteria for the Cheyenne River; and revisions to toxic pollutant criteria and footnotes consistent with the EPA's current criteria recommendations. The revisions proposed to *ARSD 74:51:02 Uses Assigned to Lakes* include: reformatting the uses table and adding listings for Lake Alexander, an unnamed lake west of Bristol, Antelope Lake (and removing Antelope Kid's Pond) and Indian Springs Lake. The revisions proposed to *ARSD 74:51:03 Uses Assigned to Streams* include: corrections to typographical errors; multiple upgraded segment breaks reflecting current highway designations; and modifications to uses designated to the North and South Forks of the Grand River, Fall River, Cold Brook and Hot Brook Creeks, Redstone Creek and Spring Creek. In response to comments received, the DENR recommended removing the site-specific total suspended solids criteria for the Cheyenne River and recreation use changes to Fall River and Spring Creek.

The revised WQS were submitted to the EPA for review with a letter dated August 6, 2015 from Steven M. Pirner, Secretary of the DENR, along with electronic media containing supporting materials. The WQS submittal package included:

- Attorney General certification that the WQS were duly adopted pursuant to State law;
- copies of all comment letters received;
- a response to comments;
- a copy of an affidavit of publication from the Watertown Public Opinion;
- a copy of the public notice;
- revisions to State WQS;
- Statement of Basis;
- supporting use attainability analyses (UAAs) for use revisions;
- Black Hills site-specific temperature criteria report; and
- minutes from the Water Management Board hearing.

Receipt of the revised South Dakota WQS on August 11, 2015 initiated EPA review pursuant to CWA Section 303(c) and the implementing federal WQS regulation at 40 C.F.R. Part 131.

The new and revised South Dakota surface WQS adopted by the Board include:

- new waterbodies and adjustments to the designated uses to State lakes and streams (see Enclosure);
- updated toxic pollutant criteria for the protection of aquatic life and human health uses;
- site-specific temperature criteria for the Black Hills Trout Management Area;
- additions, deletions and revisions to definitions; and
- reformatting, updated references and correction of typographical errors.

Clean Water Act Review Requirements

CWA Section 303(c)(2) requires states and authorized Indian tribes to submit new or revised WQS to the EPA for review. The EPA is required to review and approve or disapprove the submitted standards. Pursuant to CWA Section 303(c)(3),[3] if the EPA determines that any standard is not consistent with the applicable requirements of the Act the Agency shall notify the state or authorized tribe and specify the changes to meet the requirements. If such changes are not adopted by the state or authorized tribe within ninety days after the date of notification, the EPA is to promptly propose and promulgate such standards changes pursuant to CWA Section 303(c)(4). The EPA's goal has been, and will continue to be, to work closely with states and authorized Indian tribes throughout the standards revision process so that submitted revisions can be approved by the EPA.

[3] And as explained in 40 C.F.R. § 131.5(a).

'ursuant to the EPA's Alaska Rule (40 C.F.R. Section 131.21(c)), new or revised standards submitted to the EPA after May 30, 2000, are not applicable WQS for CWA purposes until approved by the EPA.

Endangered Species Act Requirements

The EPA's approval of the revisions to State WQS is considered a federal action which may be subject to the Section 7(a)(2) consultation requirements of the Endangered Species Act (ESA). Section 7(a)(2) of the ESA states that "each federal agency ... shall ...insure that any action authorized, funded or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined to be critical..." The EPA initiated consultation under ESA Section 7(a)(2) with the U.S. Fish and Wildlife Service (Service) regarding our approval of the new or revised WQS. The EPA also has a CWA obligation, as a separate matter, to complete its WQS action. Therefore, in acting on the State's WQS today, EPA is completing its CWA Section 303(c) responsibilities. However, because ESA consultation on the EPA's approval of these standards is ongoing, EPA might take further action at a later date in its discretion depending on the outcome of the ESA consultation process. Should the consultation process with the Service identify information regarding impacts on listed species or designated critical habitat that supports revisiting the EPA's approval, the EPA will, as appropriate, take a new action, for example, by issuing a federal regulation setting a federal WQS pursuant to its separate authority under CWA Section 303(c)(4). 33 U.S.C. § 1313(c)(4).

Today's Action

Standards Approved That Are Not Subject to ESA Consultation

The EPA has determined that its approval of the revisions to South Dakota's WQS listed below will have no effect on listed or proposed, threatened or endangered species, or is otherwise not subject to ESA consultation. For these revisions, no consultation with the Service is required. A detailed rationale for the EPA's approval of these WQS revisions can be found in the attached enclosure.

Revisions to South Dakota WQS that are approved not subject to ESA consultation are:

- added, deleted and modified definitions, correction of typographical errors, and updated references in 74:51:01 through 74:51:03;
- updated Appendix B Toxic Pollutant Criteria and footnotes for the protection of human health;
- site-specific water temperature criteria for coldwater permanent and coldwater marginal aquatic life in the Black Hills Trout Management Area;
- new lakes listed in 74:51:02 and revised uses assigned to lakes;
- reformatting the entire statewide listing of lakes in 74:51:02
- revised uses assigned to streams in 74:51:03; and
- updated section breaks in 74:51:03 to reflect current highway designations.

For the reasons set forth in the Enclosure, the EPA concludes revisions to these provisions are consistent with CWA Section 303(c) and the implementing federal WQS regulation at 40 C.F.R. Part 131. Accordingly, these revisions to State WQS are approved.

Standards Approved Subject to ESA Consultation

The following revisions are approved for the purposes of CWA Section 303(c), subject to the results of consultation with the Service under Section 7(a)(2) of the ESA. In the unlikely event that the consultation discovers that EPA's approval is likely to cause jeopardy to listed species or the adverse modification or destruction of designated critical habitat, the EPA has retained its authority to take a new action. Revisions in this category are further discussed in the attached enclosure.

The South Dakota WQS revisions approved that remain subject to the results of consultation under Section 7(a)(2) of the ESA include:

- updated toxic pollutant criteria and footnotes for the protection of aquatic life uses; and
- revised aquatic life uses assigned to Redstone Creek in 74:51:03.

Disapproved Standards and No Action

The Board adopted revisions to the segmentation and designated uses of the Fall River that combined a small (upper) segment of Fall River with the remainder of the Fall River (lower) segment through to its confluence with the Cheyenne River. Combining these two segments inadvertently assigned a limited-contact recreation use to Fall River without a supporting UAA. The WQS Regulation at 40 C.F.R. § 131.10 requires a supporting UAA for designating a subcategory of a use specified in CWA Section 101(a)(2) with less stringent criteria to a waterbody, which was not provided, so the revision to Fall River recreation uses is disapproved. The EPA understands that the Board made this Fall River recreation use revision inadvertently and will work with the DENR to designate the appropriate recreation use and develop any necessary supporting materials at the next available rulemaking opportunity. The EPA is not acting on the revised selenium criterion for the protection of aquatic life and will work with the DENR to address this at the next available rulemaking opportunity.

Indian Country

The WQS approval in today's letter applies only to waterbodies in the State of South Dakota, and does not apply to waters that are within Indian Country, as defined in 18 U.S.C. Section 1151. "Indian Country" includes any land held in trust by the United States for an Indian tribe and any other areas defined as "Indian country" within the meaning of 18 U.S.C. Section 1151. Today's letter is not intended as an action to approve or disapprove water quality standards applying to waters within Indian country. The EPA, or authorized Indian tribes, as appropriate, will retain responsibilities for water quality standards for waters within Indian country.

Conclusion

The revised WQS will help to restore, maintain and protect the quality of South Dakota surface waters. The EPA concludes that the revisions to the provisions in ARSD Chapters 74:51:01 *Surface Water Quality Standards*; 74:51:02 *Uses Assigned to Lakes*; and 74:51:03 *Uses Assigned to Streams*, excluding recreation use revisions in Fall River and the aquatic life selenium criterion, are consistent with the requirements of the CWA and the EPA's implementing regulation at 40 C.F.R. Part 131, and the revised rules are approved.

The EPA thanks the Board and the DENR for their work reviewing and revising the South Dakota WQS We recognize the significant efforts in considering and formulating revisions to State WQS, and the

environmental protection the revisions are designed to provide. The EPA looks forward to working with he Board and DENR on continued efforts to protect South Dakota surface waters. If you have questions concerning this letter, please contact George Parrish on my staff at (303) 312-7027 or parrish.george@epa.gov.

Sincerely,

Martin Hestmark
Assistant Regional Administrator
Office of Ecosystems Protection
and Remediation

Enclosure

cc: Steven M. Pirner
Secretary, South Dakota Department of Environment and Natural Resources

Patrick Snyder
South Dakota Department of Environment and Natural Resources

Scott Larson
U.S. Fish and Wildlife Service, South Dakota Field Office

Rationale for Approval of the South Dakota Water Quality Standards Revisions

PURPOSE

The purpose of this enclosure is to explain in detail the Environmental Protection Agency's (EPA or the Agency) rationale for Clean Water Act (CWA) § 303(c) action on the revisions to the South Dakota (State) water quality standards (WQS) adopted by the State's Water Management Board (Board). Discussion of the new or revised provisions is organized into the following categories: (1) WQS approved that are not subject to Endangered Species Act (ESA) consultation - including new and revised general policies, human health criteria, site-specific temperature criteria for the Black Hills, and revisions of designated uses for lakes and streams; (2) WQS approved subject to ESA consultation - including new and revised aquatic life criteria, and revisions to aquatic life uses in Redstone Creek; and (3) provisions the EPA is disapproving.

WQS Approved That Are Not Subject to ESA Consultation

The EPA concludes that its approval of the revisions to South Dakota's WQS listed below will have no effect on listed or proposed, threatened or endangered species, or is otherwise not subject to ESA consultation. For these revisions, no consultation with the U.S. Fish and Wildlife Service (Service) is required. For the reasons set forth below, EPA is approving these revisions.

Revisions approved not subject to ESA consultation include:

- added, deleted and modified definitions, correction of typographical errors, and updated references in 74:51:01 through 74:51:03;
- updated toxic pollutant criteria and footnotes for the protection of human health;
- site-specific water temperature criteria for coldwater permanent and coldwater marginal aquatic life in the Black Hills Trout Management Area;
- new lakes listings in 74:51:02 and revised aquatic life and recreation uses assigned to lakes;
- reformatting the entire statewide listing of lakes in 74:51:02;
- revised recreation and aquatic life uses assigned to streams in 74:51:03; and
- updated section breaks in 74:51:03 to reflect current highway designations.

The EPA's detailed rationale for approving each of these revisions follows.

<u>Definitions, Typographical Errors and References</u>

The Board deleted, added and modified a number of definitions in 74:51:01. Deleted definitions include:

- Administrator+
- Affected community
- "BOD" – abbreviation deleted
- Eight-hour composited sample
- Effective concentration
- High-quality fishery waters+
- Lethal concentration
- Low-quality fishery waters+
- Median lethal concentration
- MF (membrane filter)
- MPN (most probable number)
- Point source+
- Pollutant+
- Pollution+
- Pollution source +
- Secretary+
- Standard methods +
- Twenty-four hour composited sample
- Waters of the state+

Deleted definitions above marked "+" already exist elsewhere in Administrative Rules of South Dakota (ARSD), and are accessible to the public. Hence removing those definitions from 74:51:01 reduces

duplication without changing the applicability or meaning of those definitions[4] in State WQS. The remaining deleted definitions are outdated as they are no longer used in Chapters 74:51:01 – 03, so their removal does not affect the interpretation or implementation of State WQS.

Other changes to definitions include:

- Black Hills Trout Management Area – added;
- µg/L (micrograms per liter) – added;
- Warmwater permanent fish life propagation – modified to acknowledge that stocked coldwater fish may occur in these waters;
- Weekly average temperature[5] - added; and
- all definitions were renumbered.

Similar changes were made correcting typographical errors and updating references to current materials throughout ARSD 74:51:01 – 03. The new definitions provide clarity to the interpretation and implementation of the WQS. The removal of antiquated definitions and references avoids confusion and should ease the use of the WQS. Such clarifying and routine "housekeeping" revisions are needed to ensure the State's WQS remain clear, accurate and current. The EPA concludes that the revisions to definitions, references and correction of typographical errors are consistent with the CWA and the implementing WQS Regulation at 40 C.F.R. § 131.3. Accordingly, these revisions are approved.

Updated Human Health Criteria

The Board adopted revisions to the toxic pollutant numeric criteria and accompanying footnotes for the protection of human health in ARSD 74:51:01 Appendix B – Toxic Pollutant Criteria. The revisions adopted include:

- Acrolein – updated 6 µg/l (water + organism) and 9 µg/l (organism only) numeric criteria;
- Bis(2-Chloroisopropyl)Ether – classified as a carcinogen;
- Cadmium – removed 5.0 µg/l (water + organism) criterion as there is no current recommended numeric criterion;[6]
- Methylmercury – new 0.3 mg/kg fish-tissue-based criterion adopted;
- Phenol – updated 10,000 µg/l (water + organism) and 860,000 µg/l (organism only) numeric criteria; and
- footnotes 2 and 6 – removed, and other footnotes renumbered accordingly.

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[4] The EPA notes that future changes to any definitions (regardless of where those definitions reside within ARSD) that affect the meaning, implementation or interpretation of State WQS are considered revisions to WQS, and must be submitted to EPA for approval under CWA § 303(c).

[5] The EPA received a December 30, 2015 email from Patrick Snyder, DENR, clarifying that the weekly average temperature is the mathematical mean of multiple, equally spaced, temperature measurements over any 7-day consecutive period, with a minimum of three data points equally spaced throughout each day. This is a single mathematical average that includes all individual temperature measurements (after appropriate quality assurance/control measures) from a sampling location taken within any seven-day period, and does not entail any additional averaging or smoothing of the data. Such weekly averages are sometimes referred to as "rolling averages" as samples are averaged together over any continuous 7-day period (rather than across a calendar week such as Sunday through Saturday). When calculating the weekly average temperature each individual data point within any 7-day period is mathematically averaged once. So the word "daily" in the above definition refers to equally spacing the measurements taken throughout any day, and does not imply any additional averaging of the individual temperature measurements. The EPA's approval is given with this understanding, and the Agency suggests adding this clarification at the next regulatory opportunity.

[6] The EPA notes there is no current CWA § 304(a) human health numeric criterion recommendation for cadmium. The State narrative criteria will be the applicable WQS whenever necessary in implementing CWA protection for such pollutants. See ARSD 74:51:01:55 and 40 C.F.R. 131.11(a)(2). For NPDES permitting, see 40 CFR 122.44(d)(1)(vi).

The Board adopted the EPA's CWA Section 304(a) criteria recommendations that were available at the time of rulemaking,[7] and revisions to footnotes clarifying the use of the State's criteria.

The EPA concludes that the revisions to human health-based criteria and footnotes in ARSD 74:51:01 Appendix B - Toxic Pollutant Criteria are based on the best available sound science published at the time of rulemaking as set forth in the CWA Section 304(a) criteria recommendations. Therefore, the criteria revisions are consistent with the CWA and the implementing WQS Regulation at 40 C.F.R. § 131.11. Accordingly, these revisions are approved.

Site-Specific Temperature Criteria in the Black Hills Trout Management Area

The Board adopted new Sections 74:51:01:45.01 Site-specific criteria for coldwater permanent fish life propagation waters – Black Hills Trout Management Area, and 74:51:01:46.01 Site-specific criteria for coldwater marginal fish life propagation waters – Black Hills Trout Management Area. These two new sections apply the following site-specific water temperature criteria year-round to all coldwater aquatic life uses designated to individual streams within the Black Hills Trout Management Area[8]:

class 2 coldwater permanent fish life propagation waters
- 75.2°F as a daily maximum;[9]
- 66.2°F as a weekly average; and

class 3 coldwater marginal fish life propagation waters
- 75.2°F as a daily maximum.

Description of the State Proposal

These site-specific water temperature criteria for coldwater aquatic life uses in the Black Hills Trout Management Area were supported by accompanying scientific analyses.[10] The report documents the original 1967 adoption of the Black Hills class 2 and 3 coldwater aquatic life use designations and statewide coldwater temperature criteria,[11] which lead to numerous Black Hills streams historic impairment listings.[12] The report showed 16 of the 36 coldwater permanent waters, and 3 of the 16 coldwater marginal waters were, or were recently, listed as impaired as of 2010. These frequent impairment listings triggered reassessments by the DENR Total Maximum Daily Load (TMDL) team, who found no anthropogenic warm water discharges occurring in the Black Hills Trout Management Area except for a single resort area in the Fall River basin with natural geothermal springs. The DENR

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[7] The EPA published new CWA 304(a) human health criteria recommendations in 2015, after the State's public comment period and hearing were completed. The Agency looks forward to working with the DENR to help update the Appendix B Toxic Pollutant Criteria in consideration of these new recommendations at the next WQS rulemaking opportunity.

[8] "Black Hills Trout Management Area" is now defined by the State WQS (see above) and includes geographic boundaries for this area. Inside these boundaries these site-specific temperature criteria apply to thirty six class 2 coldwater permanent and sixteen class 3 coldwater marginal fish life propagation waters.

[9] "Daily maximum temperature" is not defined in ARSD but the EPA interprets this term as meaning the maximum value of any individual instantaneous instream water temperature sample taken within a calendar day. An instantaneous maximum is an upper bound applied to any individual sample (i.e., no individual water temperature sample shall exceed this value). In the case of water temperature measurements taken with continuous (or nearly-continuous) monitoring devices, none of the individual measurements are to be statistically combined (e.g., averaged), so each distinct temperature measurement (after appropriate quality assurance/control measures) is evaluated relative to that daily maximum criterion value. The EPA suggests clarifying this issue at the next regulatory opportunity.

[10] The water temperature criteria and sensitivity evaluations for resident salmonid species are presented in the supporting document *Black Hills Regional Stream Temperature Assessment Final Report*, November 2011.

[11] Previously 65 °F as a daily maximum for all class 2 and class 3 waters statewide.

[12] E.g., see The 1998 South Dakota 303(d) Waterbody List, SD DENR, July 1998, and subsequent biennial CWA 303(d) Lists and Integrated Reports.

TMDL team's seasonal temperature trend analysis[13] demonstrated that the previous aquatic life temperature criteria were not attainable in the Black Hills area coldwater streams. Nevertheless, South Dakota's study on temperature sensitivity of resident fish showed that the fish species continue to be supported such that the overall class 2 and class 3 aquatic life uses are being met. The DENR proposed the above site-specific coldwater temperature criteria after review of the Black Hills area coldwater streams ambient data collected and analyzed by the TMDL group.[14] The report, in consultation with the SD Game, Fish and Parks, evaluated the temperature sensitivity of the resident cold water fish species,[15] concluding that no use change was necessary because the "...beneficial uses of cold-water permanent and cold-water marginal fisheries were maintained".

Ultimately, this analysis lead to revised aquatic life uses for sections of Fall River and Hot Brook Creek (see New and Revised Aquatic Life and Recreation Uses Assigned to Rivers and Streams, below) and retention of the class 2 and class 3 coldwater aquatic life use designations for all other Black Hills area coldwater streams with the above site-specific temperature criteria.

EPA Review of the State Proposal

The proposed Black Hills site-specific temperature criteria and supporting materials were shared with the EPA. The DENR made revisions to the draft proposal in response to EPA comments and suggestions. The final site-specific temperature criteria proposal and supporting materials were shared with the public during the State's WQS public comment period, and included in the State's WQS submittal package.

The supporting analyses demonstrate that the previous coldwater aquatic life temperature criteria are not attainable in the Black Hills Trout Management Area. Nevertheless, the supporting analyses also demonstrate that the class 2 coldwater permanent and class 3 coldwater marginal fish life propagation waters designations remain appropriate for the Black Hills streams (except for Hot Brook Creek and Fall River). The data and analyses provided by the State and reviewed by EPA demonstrate that the populations of resident fish species are sufficiently healthy such that the class 2 and 3 designated uses are being met. In addition, the coldwater species occurring in this area will be protected by the site-specific temperature criteria adopted by the Board, which reflect the natural, site-specific characteristics in the Black Hills coldwater streams. Hence, these site-specific temperature criteria are shown to be protective of the designated cold water uses in the Black Hills coldwater streams and are consistent with 40 C.F.R. § 131.11(b)(iii).

The Board adopted site-specific temperature criteria in new Sections 74:51:01:45.01 Site-specific criteria for coldwater permanent fish life propagation waters – Black Hills Trout Management Area, and 74:51:01:46.01 Site-specific criteria for coldwater marginal fish life propagation waters – Black Hills Trout Management Area. The EPA concurs with the conclusions reached in the supporting analyses provided by DENR. The EPA concludes that the adopted site-specific water temperature criteria for Black Hills Trout Management Area streams are consistent with the CWA and the WQS Regulation at 40 C.F.R. § 131.11. Accordingly, these revisions are approved.

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[13] See *Black Hills Regional Stream Temperature Assessment Final Report*, November 2011, Section 5.4 Nature of Current Exceedances.

[14] *Ibid*, Section 6.1 Methods of Determining Maximum Stream Temperature, for "determining the temperature regime of a stream ... used to describe the beneficial use attainment of a fishery."

[15] Salmonids (brook, brown and rainbow trout) were found to be the most temperature-sensitive resident fish species and deemed protected by the proposed criteria.

New Lakes and New and Revised Aquatic Life and Recreation Uses Assigned to Lakes
The Board added and removed lakes from 74:51:02 *Uses Assigned to Lakes* recognizing some previously unclassified lakes and changes due to water tables, and made revisions to some of the designated aquatic life and recreation uses for lakes already classified in 74:51:02. These revisions are outlined in Table 1 below.

Table 1. Changes to lakes and aquatic life and recreation uses assigned to lakes in 74:51:02

WATERBODY	ACTION TAKEN	USES BEFORE ACTION	USES AFTER ACTION
Lake Alexander	New lake added with aquatic life and recreation uses	9	2, 7, 8, 9
Unnamed Lake near Bristol	Add aquatic life and recreation uses	9	4, 7, 8, 9
Antelope Kids Pond	Removed pond to become part of Antelope lake	6, 7, 8, 9	5, 7, 8, 9
Antelope Lake	Combined with Antelope Kids Pond, and add aquatic life and recreation uses	9	5, 7, 8, 9
Indian Springs Lake	New lake added with aquatic life and recreation uses	9	4, 7, 8, 9

These revisions recognize different surface footprints of lakes altered by changing water tables, and aquatic life and recreation uses that were not previously recognized and classified. The Board also adopted revisions to the formatting of the entire listing of lakes in 74:51:02.

The CWA and EPA's WQS regulation, 40 C.F.R. Part 131, establish requirements that WQS provide for uses specified in CWA Section 101(a)(2), including aquatic life and primary contact recreation, unless such uses are demonstrated to be unattainable through a use attainability analysis, effectively creating a rebuttable presumption of attainability. 40 C.F.R. § 131.10(j), identifies the situations where a Use Attainability Analysis (UAA) is required. States are required to conduct a UAA whenever: (1) designating uses that do not include those specified in CWA Section 101(a)(2); or (2) removing uses specified in CWA Section 101(a)(2) or adopting subcategories of those uses that require less stringent criteria. 40 C.F.R. § 131.10(g) further identifies the six specific use removal factors one of which must be used to demonstrate that attaining a use is infeasible. The EPA reviewed the UAAs and supporting materials shared by DENR, and worked closely with DENR to document the proposed revisions to designated uses.[16]

ARSD employs a numeric beneficial uses system (1 through 11) in assigning uses to individual waterbodies in 74:51:02 *Uses Assigned to Lakes* and 74:51:03 *Uses Assigned to Streams*, and a key is provided below in Table 2 to describe each use.

[16] UAAs were conducted for all of the revisions proposed to aquatic life and recreation uses assigned to lakes in 74:51:02; aquatic life and recreation uses assigned to streams in 74:51:03; and for site-specific temperature criteria for coldwater permanent and coldwater marginal fish life propagation uses in the Black Hills Trout Management Area.

Table 2. ARSD numeric use key for uses designated to lakes and streams

ARSD Numeric Use	Use Description
(1)	Domestic water supply
(2)	Coldwater permanent fish life propagation waters[17]
(3)	Coldwater marginal fish life propagation waters
(4)	Warmwater permanent fish life propagation waters
(5)	Warmwater semipermanent fish life propagation waters
(6)	Warmwater marginal fish life propagation waters
(7)	Immersion recreation waters[18]
(8)	Limited-contact recreation waters
(9)	Fish and wildlife propagation, recreation and stock watering waters
(10)	Irrigation waters
(11)	Commerce and industry waters

All South Dakota surface waters are assigned a minimum class 9 use designation. The proposed revisions to uses assigned to lakes and streams, supporting UAAs and other materials (e.g., draft UAAs and rationales) were shared with EPA. The final versions of these materials were shared with the public during the State's WQS public comment period, and included in the State's WQS submittal package.

The recreation UAAs included several site visits at different times of the year. DENR staff evaluated a combination of recreation use factors, including: landowner interviews, availability of recreating sites and water, public access to waters, presence of physical hazards, isolation from population centers, and availability of nearby alternative recreating sites. Where the Board adopted a class 8 Limited-contact recreation use, the DENR found no evidence that immersion recreation is occurring or has occurred in these waters. Nevertheless, it is important to note that the Limited-contact recreation use is less than the CWA Section 101(a)(2) goal use, and the State is required to re-examine these classifications in future triennial reviews to determine if any new information has become available that would alter the DENR's present finding that immersion recreation is not attainable.

The aquatic life UAAs consisted of several site visits at different times of the year. At some locations the data presented spanned multiple years. For fisheries studies DENR staff: (1) evaluated and measured flow and habitat at a number of locations along the waterbody (with photo-documentation of each station); (2) collected water quality and other site-specific information; (3) attempted to collect, identify and measure fish; (4) evaluated fish spawning occurrence and potential; and (5) used groundwater, land use and other information (wherever available). Where the Board adopted a marginal or semipermanent aquatic life use (i.e., 3, 5 or 6), the DENR found that a CWA Section 101(a) goal aquatic life use (i.e., 2 or 4) is not attainable.

[17] The EPA considers ARSD designated uses (2) Coldwater and (4) Warmwater permanent fish life propagation to be equivalent to the CWA Section 101(a)(2) aquatic life use, and such designations are considered meeting the CWA Section 101(a)(2) aquatic life goal use. Designating marginal or semipermanent aquatic life uses (i.e. 3, 5 or 6) is not considered meeting that rebuttable presumption of a fully supportive aquatic life use, and requires an accompanying UAA.

[18] The EPA considers ARSD designated uses (7) Immersion and (8) Limited-contact recreation to be equivalent to primary, and secondary contact recreation uses in EPA guidance, respectively. Designating the (8) Limited-contact recreation use is not considered meeting the rebuttable presumption of a CWA Section 101(a)(2) primary contact recreation goal use, and such designations require an accompanying UAA.

The EPA's evaluation of the final UAAs and supporting analyses concludes that the UAAs provided by DENR demonstrate that the aquatic life and recreation uses are not attainable for these waters, and the use changes to lakes adopted by the Board meet the provisions of 40 C.F.R. 131.10(g). The EPA therefore concludes that the revisions to aquatic life and recreation uses assigned to lakes and the formatting changes in ARSD 74:51:02 *Uses Assigned to Lakes* are consistent with the CWA and the WQS Regulation at 40 C.F.R. Part 131. Accordingly, these revisions are approved.

New and Revised Aquatic Life and Recreation Uses Assigned to Rivers and Streams

The Board adopted revisions to some of the designated aquatic life and recreation uses for streams in 74:51:03 *Uses Assigned to Streams* as outlined in Table 3 below.[19]

Table 3. Changes to aquatic life and recreation uses assigned to streams in 74:51:03

WATERBODY	ACTION TAKEN	USES BEFORE ACTION	USES AFTER ACTION
Redstone Creek[20]	Add recreation use	9	8, 9
Spring Creek[21]	Add upper segment with aquatic life and recreation uses	9	2, 7, 8, 9
North Fork Grand River	Add recreation use	8, 9	7, 8, 9
South Fork Grand River[22]	Add recreation use to downstream segment	lower: 8, 9 upper: 8, 9	7, 8, 9 8, 9
Hot Brook Creek	Revise aquatic life use	Seasonal[23] 3, 4, 9	4, 9
Fall River	Revise aquatic life use	Seasonal[24] 3, 4, 9	4, 9

These revisions add aquatic life and recreation uses to rivers and streams that were not previously recognized and classified. The site visits and supporting UAAs validate where the CWA Section 101(a)(2) goal uses are not attainable. The Board also adopted revisions to the segment breaks for multiple river segments reflecting new highway designations (numbering of roadways). These changes to segment break descriptions do not alter the geographic extent of the segments themselves, nor the uses assigned to the individual segments.

The proposed revisions to uses assigned to streams, supporting UAAs and other materials (e.g., draft UAAs and rationales) were shared with the EPA. The final versions of these materials were shared with the public during the State's WQS public comment period, and included in the State's WQS submittal

[19] The inadvertent changes to recreation uses assigned to the Fall River are discussed below under Disapproved Revisions.
[20] Redstone Creek from its confluence with the James River to Highway 14 is assigned a (8) Limited-contact recreation use, and remains unchanged from Highway 14 to its headwaters. Redstone Creek aquatic life use changes are discussed below.
[21] Spring Creek from headwaters to Highway 16 was previously unclassified. This new segment includes the headwaters upstream of Lake Alexander (new lake – see Table 1) and downstream to Highway 16. The Spring Creek segment from Highway 16 to Sheridan Lake is not changed by this revision.
[22] The upper segment of South Fork Grand River, from headwaters to Highway 79, retains limited-contact recreation use only. Immersion recreation use is added to the downstream segment of South Fork Grand River, from Highway 79 to Shadehill Reservoir.
[23] Hot Brook Creek from its confluence with Fall River to Section 19, Township 7 South, Range 5 East is assigned a (4) warmwater permanent fish life propagation use, and the seasonally applied (3) coldwater marginal aquatic life propagation use is removed. Hot Brook Creek upstream of Section 19, Township 7 South, Range 5 East is unchanged.
[24] Fall River from its confluence with Cheyenne River to its confluence with Cold Brook and Hot Brook Creeks is a new segment (that combined two previously separate Fall River segments) assigned a (4) warmwater permanent fish life propagation use, and the seasonally applied (3) coldwater marginal aquatic life propagation use is removed.

package. The substance and process in DENR's supporting UAAs for these use changes is described above, and the EPA's review of the supporting materials followed the same process described above.

The EPA's evaluation of the final UAAs and supporting analyses concludes that the UAAs provided by DENR demonstrate that the aquatic life and recreation uses are not attainable for these waters, and the use changes to rivers and streams adopted by the Board meet the provisions of 40 C.F.R. 131.10(g). The EPA therefore concludes that the revisions to aquatic life and recreation uses assigned to streams and the revisions to segment breaks in ARSD 74:51:03 *Uses Assigned to Streams* are consistent with the CWA and the WQS Regulation at 40 C.F.R. Part 131. Accordingly, these revisions are approved.

WQS Approved Subject to ESA Consultation

The EPA's approval of the revisions to State WQS is considered a federal action which may be subject to the Section 7(a)(2) consultation requirements of the ESA. The EPA initiated consultation under ESA Section 7(a)(2) with the Service on February 22, 2016 regarding our approval of the new or revised WQS. The EPA also has a CWA obligation, as a separate matter, to complete its WQS action. The following revisions to State WQS are approved for the purposes of CWA Section 303(c), but remain subject to the results of consultation under Section 7(a)(2) of the ESA. Therefore, in acting on the State's WQS today, EPA is completing its CWA Section 303(c) responsibilities. However, because ESA consultation on the EPA's approval of these standards is ongoing, EPA might take further action at a later date in its discretion depending on the outcome of the ESA consultation process.

In the unlikely event that the consultation discovers that EPA's approval is likely to cause jeopardy to listed species or the adverse modification or destruction of designated critical habitat, the EPA has retained its authority to address the matter through a new action. For example, EPA could issue a federal regulation setting a federal WQS pursuant to its separate authority under CWA Section 303(c)(4). 33 U.S.C. § 1313(c)(4).

The South Dakota WQS revisions approved that remain subject to the results of consultation under Section 7(a)(2) of the ESA include:

- updated toxic pollutant criteria and footnotes for the protection of aquatic life uses; and
- revised aquatic life uses assigned to Redstone Creek in 74:51:03.

Updated Toxic Pollutant Criteria and Footnotes for the Protection of Aquatic Life Uses

The Board adopted revisions to the toxic pollutant numeric criteria and accompanying footnotes for the protection of aquatic life in ARSD 74:51:01 Appendix B – Toxic Pollutant Criteria. The revisions adopted include:

- Acrolein – adopted new 3 µg/l (acute) and 3 µg/l (chronic) numeric criteria; and
- Aldrin – adopted new 3.0 µg/l acute numeric criterion.

The Board adopted the EPA's new CWA Section 304(a) aquatic life criteria recommendations that were available at the time of rulemaking,[25] and revisions to the footnote for aldrin clarifying the use of the State's criterion. The EPA considers these aquatic life criteria revisions helpful in ensuring the State's water quality criteria remain clear, current, protective of aquatic life uses, and implemented in a consistent manner.

[25] The EPA published new aquatic life criteria recommendations in 2015, after the State's public comment period and hearing were completed. The Agency looks forward to working with the DENR to help update the Appendix B Toxic Pollutant Criteria in consideration of these new recommendations at the next WQS rulemaking opportunity.

The EPA concludes that the revisions to aquatic life criteria and footnotes in ARSD 74:51:01 Appendix B - Toxic Pollutant Criteria are based on sound science as set forth in the CWA Section 304(a) criteria recommendations, and are protective of the designated uses, and therefore consistent with the CWA and the implementing WQS Regulation at 40 C.F.R. § 131.11. Accordingly, these revisions are approved, but remain subject to consultation.

Revised Aquatic Life Uses Assigned to Redstone Creek in 74:51:03

The Board adopted revisions to the aquatic life uses assigned to Redstone Creek in 74:51:03 *Uses Assigned to Streams* as outlined in Table 4 below.

Table 4. Changes to aquatic life uses assigned to Redstone Creek in 74:51:03

WATERBODY	ACTION TAKEN	USES BEFORE ACTION	USES AFTER ACTION
Redstone Creek[26]	Add aquatic life use	9	6, 9

This revision to Redstone Creek adds an aquatic life use that is protective of the aquatic communities that are present and recognizes habitat, water availability, and other limitations are present in these ecosystems.

The proposed revisions to aquatic life uses assigned to Redstone Creek, supporting UAA and other materials (e.g., draft UAA and rationale) were shared with EPA. The DENR made revisions to the proposal in response to EPA comments. The final versions of these materials were shared with the public during the State's WQS public comment period, and included in the States WQS submittal package. The substance and process in DENR's supporting UAA for these use changes is described above, and the EPA's review of the supporting materials followed the same process described above.

The principal limiting factors documented in the Redstone Creek UAA are lack of flow and habitat (40 C.F.R. 131.10(g) factors (2) and (5)). Sections of Redstone Creek, particularly upstream sections towards its headwaters, suffer from intermittent flows that regularly lead to isolated pools of water. The lack of water leads to poor or insufficient habitat, and a lack of habitat connectivity. The lack of water and habitat appears to be more pronounced upstream of Highway 14, so the DENR recommended adopting the (6) warmwater marginal aquatic life use only downstream of Highway 14.The headwaters section, upstream of Highway 14, remains unchanged.

The EPA concludes that the Redstone Creek UAA provided by DENR demonstrates that the CWA goal of aquatic life use is not attainable for these waters, and the use changes to Redstone Creek adopted by the Board meet the provisions of 40 C.F.R. 131.10(g). The EPA therefore concludes that the revisions to aquatic life uses assigned to Redstone Creek in ARSD 74:51:03 *Uses Assigned to Streams* are consistent with the CWA and the WQS Regulation at 40 C.F.R. Part 131. Accordingly, these revisions are approved, but remain subject to consultation.

[26] Redstone Creek from Section 14, Township 107 North, Range 60 West to Highway 14 is revised to include a class (6) warmwater marginal aquatic life use. Redstone Creek remains unchanged from its confluence with the James River to Section 14, Township 107 North, Range 60 West with a class (6) warmwater marginal aquatic life use, and remains unchanged from Highway 14 to its headwaters with a class (9) aquatic life use.

Disapproved WQS Provisions and No Action

The Board adopted revisions to the Fall River that combined a small (upper) segment[27] of Fall River with the remainder of the Fall River (lower) segment through to its confluence with the Cheyenne River. Combining these two segments inadvertently assigned a (8) limited-contact recreation use to Fall River without a supporting UAA (see discussion above about CWA 101(a)(2) recreation uses). The WQS Regulation at 40 C.F.R. § 131.10 requires a supporting UAA for designating a non-CWA 101(a)(2) use to a waterbody, which was not provided for Fall River, so the revision is disapproved. The EPA understands that the Board made this Fall River recreation use revision inadvertently, and will work with the DENR to designate the appropriate recreation use and develop any necessary supporting materials at the next available rulemaking opportunity.

The EPA is not acting on the revision to the numeric criterion for selenium for the protection of aquatic life. The EPA anticipates publishing a new selenium criterion recommendation shortly and will work with the DENR to address this issue at the next available rulemaking opportunity.

Because the EPA is disapproving the Fall River recreation use change and not acting on the selenium criterion revision there is no change to the existing WQS under the CWA. Therefore, there is no requirement for the EPA to engage in ESA consultation regarding listed species or their designated critical habitat for these provisions.

[27] The upper Fall River segment from the confluence of Hot Brook and Cold Brook Creeks to the southern edge of Section 13, Township 7 South, Range 5 East, was combined with the lower Fall River segment (downstream to its confluence with the Cheyenne River) to form a single Fall River segment.